Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A method of immunizing a vertebrate against a virus selected from an influenza virus and a rotavirus, said method comprising administering to a vertebrate a plasmid vector ~~DNA transcription unit~~ comprising DNA encoding ~~a desired~~ an influenza virus antigen or a rotavirus antigen operatively linked to DNA which is a promoter region, whereby a humoral immune response, a cell-mediated immune response or both is elicited against ~~a desired~~ the antigen.

2. (Currently amended) The method of Claim 1, wherein the promoter region of ~~a DNA transcription unit~~ the plasmid vector is of nonretroviral origin.

3. (Currently amended) The method of Claim 1, wherein the promoter-region of ~~a DNA transcription unit~~ the plasmid vector is of retroviral origin.

4. (Currently amended) The method of Claim 1, wherein ~~a desired~~ the antigen is capable of eliciting a protective immune response against an infectious agent.

5. (Canceled)

6 (Currently amended) The method of Claim [[5]] 1, wherein the virus is an influenza virus.

7. (Currently amended) The method of Claim 6, wherein ~~a desired~~ the antigen is an influenza virus hemagglutinin.

8. (Currently amended) The method of Claim [[5]] 1, wherein the virus is a rotavirus.

9.-10. (Canceled)

11. (Original) The method of Claim 1, wherein the vertebrate is a mammal.

12. (Currently amended) The method of Claim [[7]] 11, wherein the mammal is a human.

13. (Currently amended) The method of Claim 1, wherein the ~~DNA transcription unit~~ plasmid vector, in a physiologically acceptable carrier, is administered to a vertebrate through a route of administration selected from the group consisting of: intravenous, intramuscular, intraperitoneal, intradermal and subcutaneous.

14. (Currently amended) The method of Claim 1, wherein the ~~DNA transcription unit~~ plasmid vector is administered to a vertebrate by contacting the ~~DNA transcription unit~~ plasmid vector, in a physiologically acceptable carrier, with a mucosal surface of the vertebrate.

15. (Currently amended) The method of Claim 1, wherein the ~~DNA transcription unit~~ plasmid vector is microsphere encapsulated, and is administered to a vertebrate by contacting microsphere encapsulated ~~DNA transcription unit~~ plasmid vector, in a physiologically acceptable carrier, with a mucosal surface of the vertebrate.

16. (Currently amended) A method of immunizing a vertebrate against a virus selected from an influenza virus and a rotavirus, said method comprising administering to a vertebrate one or more ~~DNA transcription units~~ plasmid vectors, each comprising DNA encoding ~~a desired antigen~~ an influenza virus antigen or antigens, or a rotavirus antigen or antigens operatively linked to DNA which is a promoter region, whereby a humoral immune response, a cell-mediated immune response or both is elicited against ~~a desired~~ the antigen or antigens.

17. (Currently amended) A method of immunizing a vertebrate against ~~an infectious agent~~, a virus selected from an influenza virus and a rotavirus said method comprising administering to a mucosal surface of the vertebrate a ~~DNA transcription unit~~ plasmid vector comprising DNA encoding ~~a desired~~ an influenza virus antigen or a rotavirus antigen operatively linked to DNA which is a promoter region, in a physiologically acceptable carrier, thereby eliciting a humoral or cell-mediated immune response, or both, against ~~a desired~~ the antigen, whereby the vertebrate is protected from disease caused by ~~an infectious agent~~ the virus.

18. (Currently amended) The method of Claim 17, wherein the promoter region of ~~a DNA transcription unit~~ the plasmid vector is of nonretroviral origin.

19. (Currently amended) The method of Claim 17, wherein the promoter region of ~~a DNA transcription unit~~ the plasmid vector is of retroviral origin.

20. (Original) The method of Claim 17, wherein the mucosal surface is a respiratory mucosal surface.

21. (Original) The method of Claim 20, wherein the respiratory mucosal surface is a nasal mucosal surface.

22. (Original) The method of claim 20, wherein the respiratory mucosal surface is a tracheal mucosal surface.

23. (Currently amended) The method of Claim 17, wherein the ~~DNA transcription unit~~ plasmid vector is microsphere encapsulated.

24. (Canceled)

25. (Currently amended) The method of Claim [[24]] 17, wherein the virus is an influenza virus.

26. (Currently amended) The method of Claim 25, wherein ~~a desired~~ the antigen is an influenza virus hemagglutinin.

27. (Currently amended) The method of Claim [[24]] 17, wherein the virus is a rotavirus.

28.-29. (Canceled)

30. (Original) The method of Claim 17, wherein the vertebrate is a mammal.

31. (Original) The method of Claim 30, wherein the mammal is a human.

32. (Currently amended) A method of immunizing a vertebrate against ~~an infectious agent~~ a virus selected from an influenza virus and a rotavirus, said method comprising administering parenterally to the vertebrate a ~~DNA transcription unit~~ plasmid vector comprising DNA encoding ~~a desired~~ an influenza virus antigen or a rotavirus antigen ~~of an infectious agent~~ operatively linked to DNA which is a promoter region, in a physiologically acceptable carrier, thereby eliciting a humoral or cell-mediated immune response, or both, against ~~a desired~~ the antigen, whereby the vertebrate is protected from disease caused by the infectious agent.

33. (Currently amended) The method of ~~claim~~ Claim 32, wherein the route of administration is chosen from the group consisting of intravenous, intramuscular, intraperitoneal, intradermal and subcutaneous.

34. (Currently amended) The method of Claim 32, wherein the promoter region of ~~a DNA transcription unit~~ the plasmid vector is of nonretroviral origin.

35. (Currently amended) The method of Claim 32, wherein the promoter region of ~~a DNA transcription unit~~ the plasmid vector is of retroviral origin.

36. (Canceled)

37. (Original) The method of Claim 36, wherein the virus is an influenza virus.

38. (Currently amended) The method of Claim 37, wherein ~~a desired~~ the antigen is an influenza virus hemagglutiniin.

39. (Original) The method of Claim 36, wherein the virus is a rotavirus.

40.-41. (Canceled)

42. (Original) The method of Claim 32, wherein the vertebrate is a mammal.

43. (Original) The method of Claim 42, wherein the mammal is a human.

44.-51. (Canceled)

52. (Currently amended) A method of immunizing a mammal against an influenza virus, said method comprising administering to the mammal a ~~DNA transcription unit~~ plasmid vector comprising DNA encoding an antigen of the influenza virus operatively linked to DNA which is a promoter region, in a physiologically acceptable carrier, and thereby eliciting a humoral or cell-mediated immune response, or both, against the ~~desired~~ antigen, whereby the vertebrate is protected from disease caused by the influenza virus.

53. (Currently amended) The method of Claim 52, wherein the ~~DNA transcription unit~~ plasmid vector is administered in combination with one or more additional ~~DNA transcription units~~ plasmid vectors, each comprising DNA encoding a different antigen of an influenza virus operatively linked to a promoter region.

54. (Original) The method of Claim 53, wherein the different antigens are from different subtypes of influenza.

55. (Original) The method of Claim 53, wherein the different antigens are from different subgroups of influenza.

56. (Original) The method of Claim 53, wherein the different antigens are from different subgroups and different subtypes of influenza.